



IMPLICATIONS OF CONSUMER BEHAVIORAL FACTORS ON CUSTOMER RELATIONSHIP MANAGEMENT

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ABSTRACT

The following paper emphasizes the broad outline of application of consumer behavior especially in the area of marketing. Previously it was taken into consideration that the consumers are the end points of the overall selling- buying process. But through the years this rigid theory exists no more. The whole marketing concept now doesn't complete by the selling point. It believes that the buying behavior of consumer is the threshold of Customer Relationship Management (CRM). The buying behavior of the consumer is complex in nature since it is influenced by several other factors which are analyzed in the paper. The most critical factor is the Psychological factor of consumer which is again influenced by some key factors. A hypothesis is taken into consideration which states that: The consumer behavior rests on 4 broad factors: Empathy, Reliability, Responsiveness and Assurance. The main limitation of such research work is to get the actual feedback of the consumers & record them accordingly. A case study is made on consumers of Airtel Telecom Services for this purpose and for testing the hypothesis, data has been collected from different customers of different age, sex, income & lifestyle group. The relevance of such testing lies in the fact that if the hypothesis is accepted that there is correlation, then this will lead to a long term relationship between the organization and the customers which in turn will lead to value addition to the organizations as well as the society as whole.

KEYWORDS: Consumer Behavior, Customer Relationship Management, Reliability, Responsiveness.

INTRODUCTION

Consumer Behavior is a critical study about how consumer behaves in the overall process of purchasing. Different authors have analyzed this field and found out several factors which determine the consumer behavior. As per the literature – Kotler & Keller, 2012, the factors of consumer behavior are previous experience of the consumer, tastes, prices & branding of the product. Another study was conducted by Acebron Et Al, 2000. The objective of the study was to find out the impact of previous experience on the buying behavior of fresh foods. There has been study made on the impact of consumer behavior on CRM. One such work was –An integrated framework for customer value & customer-relationship-management performance: a customer based perspective from China by -

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Most of the works in this field has emphasized the point that the consumer behaviour is dependent on personal factors like age, income, personal likings & disliking on one hand & external factors like branding, packaging, cross- cultural influences, customer beliefs etc on other hand. But if we focus on today's market we will see that customers are pro-active in nature than before. For this the relationship between the organisations & the customers has also changed.

A customer belief has also changed & is more affected by the organisation- customer interface than sole internal or external factors.

After the related literature reviews on this topic, an analysis is been made here to find out how far the interface is helpful in building an affirmative CRM. For the successful completion of the testing statistical applications such as CHI- Square & ANOVA has been used. Once the problem & hypothesis is tested statistically we will be able to find out the exact correlation between Consumer behaviour & CRM.

MATERIALS AND METHODS

It is very important to use statistical methods to find out the actual correlation between the various factors affecting Consumer Behaviour & Customer Relationship Management. Two critical consumer behavioural determinants – Reliability & Responsiveness are considered here to access their relation with CRM. In this study two statistical application as well as research methodologies has been made to derive the conclusions. One of them is One –Way ANOVA & the other is Chi-Square.

One Way ANOVA: This method helps us to determine whether there are any significant differences between the means of three or more independent groups. The dimension based on which the consumer perception is taken here is their income level. Here the test will be finding out whether Reliability of Consumer over the organisation is able to build the Customer Relationship Management.

For this, a sample of 18 consumers out of 70 is taken to test the hypothesis. An

investigation is made about the perception of consumers (Both male & female) belonging to different income (Rs/ month) groups. Using $\alpha=0.05$ & the following data where higher scores indicate higher correlation, test the hypothesis whether Reliability of consumer over the organization helps in building CRM.

Table-1: Compilation of Aggregate Rating of Individual Respondents for Five Reliability (RL) Factors each measured on a (0-2) Point Scale

Cumulative Rating for RL Factors Income Category wise	25000-5000	25000-50000	Salary>50000
Respondent-1	6	5	6
Respondent-2	5	5	7
Respondent-3	4	4	6
Respondent-4	5	4	5
Respondent-5	6	5	6
Respondent-6	4	4	6

Hypothetical Analysis and Interpretation

Hypothesis-1

H₁1: There is no statistically significant difference in the opinion on the implication of reliability factor on CRM across categories of respondents defined by their income status.

H₁2: There is statistically significant difference in the opinion on the implication of reliability factor on CRM across categories of respondents defined by their income status.

Table-2: Calculation for Construction of ANOVA Table

Salary<25000		25000-50000		Salary>50000	
X ₁	X ₁ ²	X ₂	X ₂ ²	X ₃	X ₃ ²
6	36	5	25	6	36
5	25	5	25	7	49
4	16	4	16	6	36
5	25	4	16	5	25
6	36	5	25	6	36
4	16	4	16	6	36
30	154	27	123	36	218

Here r=3 (income level) with n₁=n₂=n₃=6 and n=18.

T= Sum of all observations in the three income levels

$$= \sum X_1 + \sum X_2 + \sum X_3$$

$$= 30 + 27 + 36 = 93$$

$$CF = \text{Correction factor} = T^2/n = (93)^2/18 = 480.50$$

$$SST = \text{Total sum of squares} = (\sum X_1^2 + \sum X_2^2 + \sum X_3^2) - CF = (154 + 123 + 218) - 480.50 = 14.50$$

SSTR = Sum of squares between the samples

$$\{(\sum X_1)^2/n_1 + (\sum X_2)^2/n_2 + (\sum X_3)^2/n_3\} - CF$$

$$= \{(30)^2/6 + (27)^2/6 + (36)^2/6\} - 480.50$$

$$= (150 + 121.5 + 216) - 480.50 = 7 \text{ SSE} = SST - SSTR = 14.50 - 7 = 7.50$$

$$\text{Degrees of Freedom: } df_1 = r - 1 = 3 - 1 = 2$$

$$df_2 = n - r = 18 - 3 = 15$$

$$\text{Thus } MSTR = SSTR/df_1 = 7/2 = 3.5 \text{ and } MSE = SSE/df_2 = 7.50/15 = 0.5$$

Table 3: ANOVA Table

Sources of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	Test-Statistic
Between Samples	7	2	3.5	F = 3.5/0.5 = 7
Within Samples	7.5	15	0.5	
TOTAL	14.5	17		

Interpretation: The value of F for $df_1=2$, $df_2=15$ & $\alpha=0.05$ is 3.68. Since the calculated value of $F=7$ is more than its table value, the Null hypothesis is rejected.

Result: Hence we conclude that the factor Reliability helps in the building of CRM.

Hypothesis-2:

H₀2: There is no significant correlation between responsiveness factors and CRM.

H_a2: There is significant correlation between responsiveness factors and CRM.

CHI-SQUARE: In such method a comparison is made between the observed data & the data we would expect to obtain.

Using the same sample of 70 individuals belonging to different income groups, an average consumer's overview was taken regarding their perception about responsiveness of the companies towards them based on factors namely- timeliness, appropriate actions, speed of dispensing, consistency in services & Customer – friendly services does it have anything to do with long term CRM. The consumers were asked to rate their views out of 10. Then an average is made out of it. This will derive the conclusion. The data lies as follows:

Table-4: Observed Frequencies of Respondents Income Status wise

Category	Salary <25000	25000-50000	Salary > 50000
No of Individuals	40	20	10
Average Ratings(out of 10)	8.13	6.75	10

The expected rating is $8.13 + 6.75 + 10 = 24.88/3 = 8.29$

Here we assume the Null Hypothesis that there is correlation between the Responsiveness of the organizations towards the consumers & CRM. Now arranging the data:

Table-5: Chi-Square Table indicating the correlation between RS Factors and CRM

CATEGORY	Observed(O)	Expected(E)	O-E	(O-E) ²	(O-E) ² /2
Salary <25000	8.13	8.29	-0.16	0.03	0.01
25000-50000	6.75	8.29	-1.54	2.37	1.19
Salary > 50000	10	8.29	1.71	2.92	1.46
					$\chi^2 = 2.658$

Interpretation: The critical value of $\chi^2 = 5.99$ at $\alpha=0.05$ and $df=3-1=2$. Since calculated value $\chi^2_{\text{cal}} = 2.658$ is less than its critical value, the hypothesis is accepted.

Result: From the research findings it was observed that there is no statistically significant relation between responsiveness factors and CRM.

DISCUSSION

As stated in the introduction part that the validity of the topic lies in the fact that the hypothesis is accepted or rejected, statistical applications have been made to derive the conclusions. The reasons & procedures for choosing ANOVA & CHI-SQUARE are as follows:

1. Interviewing consumers about their perception over factor like Responsiveness would give us qualitative kind of feedback i.e. Yes/No pattern. Thus data collection would be difficult. Thus rating method is used in order to collect the data.
2. Data has been collected using demographical factors – Age, Sex, Income & Lifestyle.
3. Consumers belong to different demographic groups. The most significant factor assumed here is the income of the consumer, since it is the purchasing power which leads to the consumer- organization interface.
4. In case of ANOVA, a sample of 18 people was taken. They were provided with questionnaire and asked to rate their views out of 10. A format of the questionnaire used for assessing the influence of reliability factors is presented below:

QUESTIONNAIRE Adopted for Survey

I, Madhushree Sur, Lecturer at St Hopkins College of Management, Bangalore University is conducting a research study on the influence of consumer behavioral aspects over CRM. For this purpose I require some relevant data. I request you to provide me your honest feedback on your perception about Reliability & Responsiveness of Airtel Telecom Services Pvt Ltd. I assure to maintain the confidentiality of the data and the persons involved here and promise to use this data only for this publication process.

1. Please rate the following factors of Reliability on a (0-2) point scale.

Dimension-1: Reliability

Questions/Income Group	Salary < 25000	25000-50000	Salary > 50000
Provision of Utilities(2)			
Premium Value for the Price Paid(2)			
Grievance Redressal Mechanism (2)			
Post Purchase Services(2)			
False Claims(2)			
TOTAL (out of 10)			

2. Please rate the following factors of Responsiveness on a (0-2) point scale.

Dimension-2: Responsiveness

Questions/Income Group	Salary < 25000	25000-50000	Salary > 50000
Timeliness(2)			
Appropriate Answer to Queries(2)			
Speed of Response (2)			
Consistency in Services(2)			
Customer Friendly Services(2)			
TOTAL (out of 10)			

FINDINGS

In this paper, two statistical applications have been made. In case of ANOVA, the Null Hypothesis is rejected. This has helped us to draw the conclusion that if the organization is able to prove itself reliable to the consumers, there would be strong bonding between the organization & the consumers which would lead to effective Customer Relationship Management.

On the other hand the CHI- SQUARE test has lead to the acceptance of Null Hypothesis. This derives the conclusion that consumers do not think that only responsiveness of the organization will help in the building of CRM.

The main findings out of the two tests made in this paper are as below:

Consumers want reliable persons from the organizational side. Problems should be solved timely but also appropriately.

Only responsiveness without any kind of outcome leads to nothing.

If all such perspectives of consumers are kept in mind by the organization & its personnel, it will lead to a strong Customer Relationship Management.

CONCLUSION

The final results may be concluded that, in both cases of Reliability & Responsiveness there is a correlation which helps in building Customer Relationship management. But much more importance is given on the appropriateness of services provided by the organization to the consumers. If we take the example of the data collected for ANOVA, we will find that maximum people has rated above 5 which means they think- if the organization as well as the personnel representing the organization is reliable, it will help to build a long term relationship between the customer & organization.

However the success of the test lies in the results derived through the statistical application of ANOVA & CHI-SQUARE. There are open perspectives of this paper which will lead to future analysis of several applications like that of CRM.

Moreover such study will help in the overall development of the Customer –Organization interface which will ultimately help in the overall development of the society.

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